
North Dakota Graphic Arts

Content Standards

Approved & Adopted
February 2007



North Dakota Department of Career and Technical Education

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North Dakota Commercial Arts Standards

Introduction

Goal

The North Dakota Department of Career and Technical Education is committed to working on standards to ensure that each program area can offer courses that allow students to acquire knowledge and skills. CTE not only provides technical skills and knowledge for students to succeed in careers, but also cross-functional workplace skills such as teamwork, problem solving, the ability to find and use information, and provide the context in which traditional educational goals and academic skills can be enhanced.

Process

The standards process is one that directly involves the state supervisor(s), the curriculum administrator for this agency, and teachers working directly with the content at hand. Once the standards are written and expectations are clearly defined, the standards are then compared and ultimately aligned with national and industry standards.

Academic Integration

The Department of Career and Technical Education strongly believes in the importance of academic integration within each program area. The standards produced for each program area will be cross walked with the most current academic drafts of English Language Arts, Mathematics, and Science. When possible, standards will be cross walked with other academic areas that correspond.



Definitions

Each standard includes one or more topic statements and competencies. The competencies are categorized into three divisions: Introductory, Core, and Advanced. These divisions are defined as:

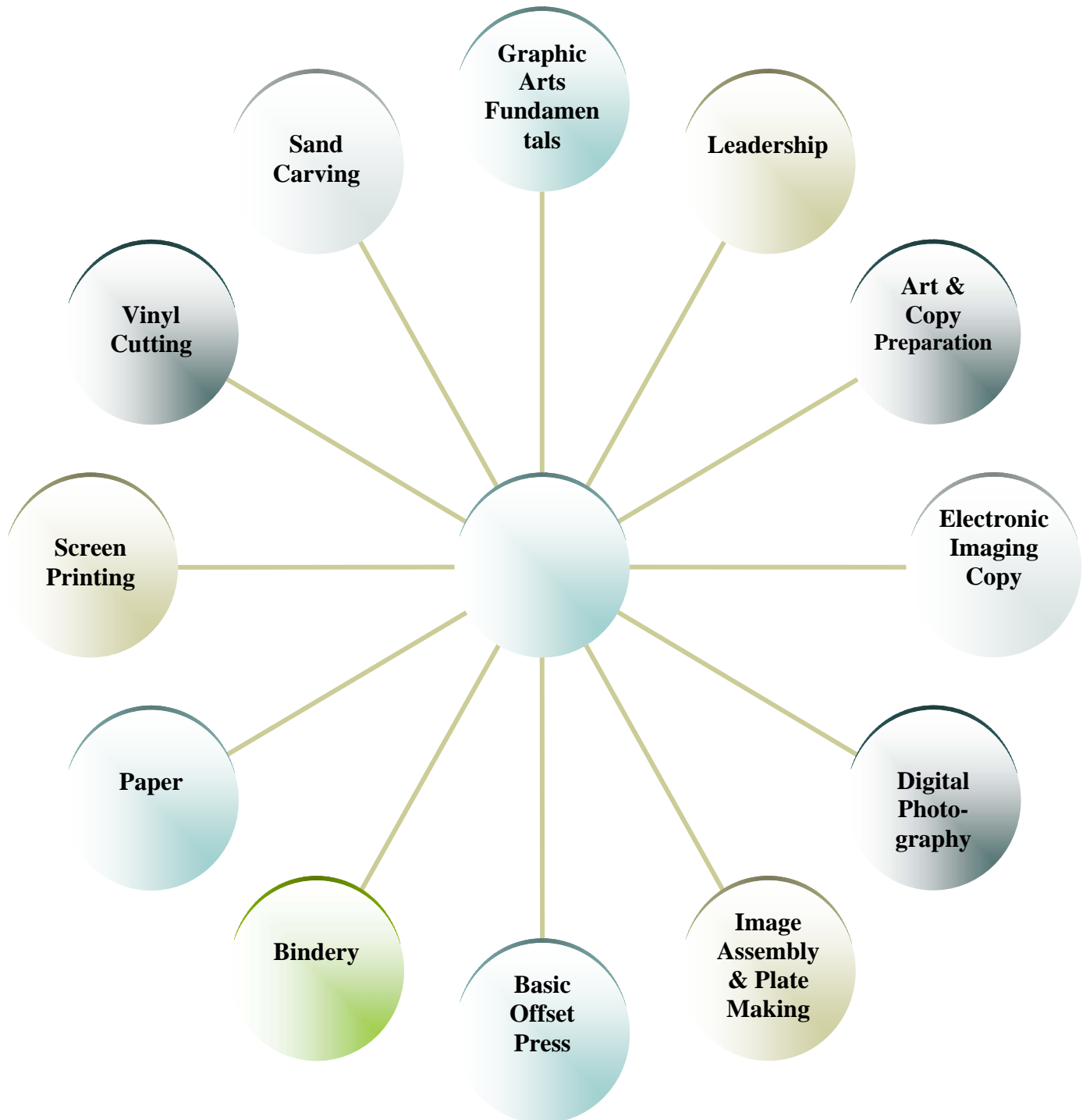
Introductory:	Learners at this level expand awareness and build comprehension of knowledge.
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Core:	Learners at this level experience acquired knowledge by applying it to situations and self .
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Advanced:	Learners at this level analyze, synthesize, judge, assess, and evaluate knowledge in accord with their own goals, values, and beliefs, and/or real situations .
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Overview of Standards



Standards at a Glance

COMPREHENSIVE STANDARDS

- 1.0 GRAPHIC ARTS FUNDAMENTALS
 - Provide an overview of the industry.
- 2.0 LEADERSHIP
 - Integrate knowledge, skills and practices to become a leader.
- 3.0 ART AND COPY PREPARATION
 - Establish art and copy preparation presentations.
- 4.0 ELECTRONIC IMAGING COPY
 - Employ applications to create electronic imaging copy.
- 5.0 DIGITAL PHOTOGRAPHY
 - Implement digital photography skills.
- 6.0 IMAGE ASSEMBLY AND PLATE MAKING
 - Investigate aspects of image assembly and plate making.
- 7.0 BASIC OFFSET PRESS
 - Demonstrate basic offset press functions.
- 8.0 BINDERY
 - Demonstrate methods of bindery.
- 9.0 PAPER
 - Analyze paper properties and costs.
- 10.0 SCREEN PRINTING
 - Perform various stages of screen printing.
- 11.0 VINYL CUTTING
 - Demonstrate vinyl cutting techniques.
- 12.0 SAND CARVING
 - Perform sand carving procedures.

Standard with Topics

CONTENT STANDARDS

1.0 GRAPHIC ARTS FUNDAMENTALS

- Provide an overview of the industry.
 - 1.1 Identify major printing processes.
 - 1.2 Enumerate breakdown of business and technical production flow.
 - 1.3 Implement proficient laboratory safety practices.
 - 1.4 Examine copyright laws.
 - 1.5 Develop job seeking skills.
 - 1.6 Practice basic math and measurement skills.

2.0 LEADERSHIP

- Integrate knowledge, skills and practices to become a leader.
 - 2.1 Develop and practice leadership skills.

3.0 ART AND COPY PREPARATION

- Establish art and copy preparation presentations.
 - 3.1 Utilize organization skills for copy planning.
 - 3.2 Explore the impacts of typography.
 - 3.3 Recognize design principles in relation to media.

4.0 ELECTRONIC IMAGING COPY

- Employ applications to create electronic imaging copy.
 - 4.1 Identify formats of type composition and typesetting.
 - 4.2 Understand proofreading elements.
 - 4.3 Prepare a page layout.
 - 4.4 Performing scanning operations.
 - 4.5 Investigate methods of graphic manipulation.
 - 4.6 Employ storage procedures.
 - 4.7 Administer electronic imaging.

5.0 DIGITAL PHOTOGRAPHY

- Implement digital photography skills.
 - 5.1 Evaluate camera types.
 - 5.2 Choose picture storage locations.

6.0 IMAGE ASSEMBLY AND PLATE MAKING

- Investigate aspects of image assembly and plate making.
 - 6.1 Construct masking sheets using the appropriate stripping procedures.
 - 6.2 Determine plate preparation and exposure calibration techniques.

7.0 BASIC OFFSET PRESS

- Demonstrate basic offset press functions.
 - 7.1 Understand main press systems.
 - 7.2 Demonstrate press preparations.
 - 7.3 Operate offset presswork.
 - 7.4 Perform maintenance tasks.
-

8.0 BINDERY

- Demonstrate methods of bindery.
 - 8.1 Operate a paper jogger.
 - 8.2 Operate a paper drill.
 - 8.3 Operate a hydraulic paper cutter.
 - 8.4 Operate a folding machine.
 - 8.5 Utilize methods of binding.

9.0 PAPER

- Analyze paper properties and costs.
 - 9.1 Properties of paper.
 - 9.2 Understand estimating factors.

10.0 SCREEN PRINTING

- Perform various stages of screen printing.
 - 10.1 Select screen material for appropriate use.
 - 10.2 Utilize block-out material for image production.
 - 10.3 Introduce screen printing inks.
 - 10.4 Illustrate aspects of alignment.

11.0 VINYL CUTTING

- Demonstrate vinyl cutting techniques.
 - 11.1 Operate a vinyl cutting machine (plotter).
 - 11.2 Utilize application software.
 - 11.3 Perform vinyl application.

12.0 SAND CARVING

- Perform sand carving procedures.
 - 12.1 Use various methods for the generation of positive.
 - 12.2 Produce imagery with masking materials.
 - 12.3 Perform mask applications.
 - 12.4 Demonstrate sandblasting techniques.
-

Standard 1: Graphic Arts Fundamentals: Provide an overview of the industry.

Topic 1: Identify major printing processes.

Student Competencies

Introductory:

- 1.1.1. List and explain each of the major printing processes.

Core:

- 1.1.2 Demonstrate a printing process to get to an end product (e.g., offset press, screen printing, etc.)

Keys to Employability

Basic Skills:

1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
2. Writing → Communicates thoughts, ideas, information and messages in writing; and creates documents such as letters, directions, manuals, reports, graphs and flow charts.
3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
4. Listening → Receives, attends to, interprets, and responds to verbal messages and other cues.
5. Speaking → Organizes ideas and communicates orally.

Thinking Skills

1. Creative Thinking → Generates new ideas.
2. Decision-Making → Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
3. Problem Solving → Recognizes problems and devises and implements plan of action.
4. Seeing Things in the Mind's Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
6. Reasoning → Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

Standard 1: Graphic Arts Fundamentals: Provide an overview of the industry.

Topic 2: Enumerate breakdown of business and technical production flow.

Student Competencies

Introductory:

- 1.2.1 Match job titles with descriptions of job duties.
- 1.2.2 Identify the steps for initiating a printing job.

Core:

- 1.2.3 Arrange the proper sequence of production steps.
- 1.2.4 Complete job tickets.
- 1.2.5 Interpret job ticket communication between departments.
- 1.2.6 Apply job specification from a sample job ticket.

Keys to Employability – Cont.

Technology

1. Selects Technology → Chooses procedures, tools, or equipment, including computers and related technologies.
2. Applies Technology to Task → Understand overall intent and proper procedures for setup and operation of equipment.
3. Maintains and Troubleshoots Equipment → Prevents identifies, or solves problems with equipment, including computers, and other technologies.

Resources

1. Time → Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
2. Money → Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
3. Material and Facilities → Acquires, stores, allocates, and uses materials or space efficiently.
4. Human Resources → Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

Interpersonal

1. Participates as a Member of a Team → Contributes to group effort.
2. Teaches Others New Skills.
3. Serves Clients/Customers → Works to satisfy customer's expectations.
4. Exercises Leadership → Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
5. Negotiates → Works toward agreements involving exchange of resources, resolves divergent interests.
6. Works with Diversity → Works well with men and women from diverse backgrounds.

Standard 1: Graphic Arts Fundamentals: Provide an overview of the industry.

Topic 3: Implement proficient laboratory safety practices.

Student Competencies

Introductory:

- 1.3.1 List safety rules for housekeeping, fire, electrical, first aid, hand tools, machines and shop policies.
- 1.3.2 Identify colors of safety code, classes of fires, and types of fire extinguishers.
- 1.3.3 Describe how to read MSDS sheets (material safety data sheets).

Core:

- 1.3.4 Recall proper sequence of steps in case of an accident.
- 1.3.5 Demonstrate personal and general safety precautions (e.g., first aid, etc.).
- 1.3.6 Maintain a clean, orderly and safe work area.

Keys to Employability – Cont.

Personal Qualities

1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
3. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
4. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
5. Integrity/Honesty → Chooses ethical courses of action.

Systems

1. Understand Systems → Knows how social, organizational and technological systems work and Operates effectively with them.
2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
3. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

1. Acquires and Evaluates Information.
2. Organizes and Maintains Information.
3. Interprets and Communicates Information.
4. Uses Computers to Process Information.

Standard 1: Graphic Arts Fundamentals: Provide an overview of the industry.

Topic 4: Identify copy right laws.

Student Competencies

Introductory:

- 1.4.1 Identify elements of the U.S. copyright law.
- 1.4.2 Recognize local printing trade customs.

Core:

- 1.4.3 Understand “fair use” of copy written material, both published and electronic.
- 1.4.4 Analyze items that may or may not be copyrighted.

Standard 1: Graphic Arts Fundamentals: Provide an overview of the industry.

Topic 5: Develop job seeking skills.

Student Competencies

Core:

- 1.5.1 Write a resume using technical skills.
- 1.5.2 Prepare a personal portfolio.
- 1.5.3 Practice job seeking skills (e.g., interviewing role playing, job shadowing, etc.)

Standard 1: Graphic Arts Fundamentals: Provide an overview of the industry.

Topic 6: Practice basic math and measurement skills.

Student Competencies

Introductory:

1.6.1 Identify basic measuring tools.

Core:

- 1.6.2 Add and subtract decimals and fractions.
- 1.6.3 Transition between fractions and decimals.
- 1.6.4 Transition between feet and inches.
- 1.6.5 Calculate area and volume.
- 1.6.6 Calculate simple percent and discounts.
- 1.6.7 Calculate time and money relating to a production job.
- 1.6.8 Convert the printer's point system to inches.
- 1.6.9 Use measuring tools to accurately measure to 1/16 inch.
- 1.6.10 Use a line gauge to measure picas and points.
- 1.6.11 Use a proportional wheel to calculate reduction and enlargement.

Standard 1: Graphic Arts Fundamentals: Provide an overview of the industry.

Academic Cross Walk

English Language Arts

- 10.1.1. Form questions to focus research
- 10.1.2 Know ways to effectively search electronic databases; e.g., defining key terms and using limiters to focus a search
- 10.1.4 Use relevant information
- 10.1.5 Organize information from a variety of sources into a unified whole
- 10.1.7 Paraphrase information
- 10.1.9 Develop an outline
- 10.1.11 Present research information; e.g., informative speech, PowerPoint presentation, video presentation
- 10.2.3 Read for a variety of purposes and intents; e.g., to become life-long readers, to model forms of writing, etc.
- 11.1.1 Research topics independently using appropriate sources
- 11.1.2 Evaluate and incorporate information from primary sources; e.g., interviews and surveys
- 11.1.5 Synthesize information in a logical sequence
- 11.2.7 Read for a variety of purposes and intents; e.g., to become life-long readers, to model forms of writing, etc.

Mathematics

- 9-10.1.10 Explain the reasonableness of a problem's solution and the process used to obtain it
- 9-10.3.1 Construct appropriate displays of given data; i.e., circle graphs, bar graphs, histograms, stem-and-leaf plots, box-and-whisker plots, and scatter plots
- 9-10.3.2 Interpret a given visual representation (i.e., circle graphs, bar graphs, histograms, stem-and-leaf plots, box-and-whisker plots, and scatter plots) of a set of data
- 9-10.4.3 Use approximations to compare the standard and metric systems of measurement; e.g., a five-kilometer race is about three miles long
- 9-10.4.4 Given a conversion factor, convert between standard and metric measurements
- 9-10.4.5 Employ estimation techniques to evaluate reasonableness of results in measurement situations
- 11-12.3.1 Choose, construct, and interpret a display to represent a set of data

Standard 1: Graphic Arts Fundamentals: Provide an overview of the industry.

Academic Cross Walk

Science

- 9-10.1.2 Describe the interaction of components within a system (e.g., interactions between living and nonliving components of an ecosystem, interaction between organelles of a cell)
- 9-10.1.5 Explain how classification can be based on the relationship between form and function (e.g., elements and compounds, biological classifications, types of clouds)
- 9-10.2.2 Use appropriate safety equipment and precautions during investigations (e.g., goggles, apron, eye wash station)
- 9-10.3.5 Identify the reactants and products in a chemical reaction
- 9-10.6.1 Use appropriate technologies and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills)
- 9-10.6.2 Explain how scientific principles have been used to create common technologies (e.g., household appliances, automotive parts, agricultural equipment, textiles, fabrics, computers, Internet resources, CD-ROMs)
- 9-10.6.3 Explain how emerging technologies (e.g., genetic manipulation, biofuels, and hydrogen fuels) may impact society and the environment
- 9-10.8.4 Identify theories that have changed over time (e.g., alchemy, atomic structure, model of the solar system)
- 11-12.1.5 Explain how classification can be based on the relationship between form and function (e.g., polar vs. nonpolar molecules, structure of periodic table, DNA vs. RNA)
- 11-12.6.1 Select and use appropriate technologies, tools, and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills, CBL, graphing calculators)
- 11-12.6.2 Identify examples of how new technologies advance science -
- 11-12.6.3 Explain how designing and implementing technology requires weighing trade-offs between positive and negative impacts on humans and the environment

Science – Cont.

- 11-12.7.1 Explain the impact of environmental laws and policies on the environment and society (e.g., waste/pollutants from industry, carbon dioxide emissions, location and number of animals in a feedlot versus water supply)
- 11-12.7.3 Explain the economic and social impact of using alternative energy resources
- 11-12.7.4 Explain how science and technology can influence personal, industrial, and cultural decision-making (e.g., organ transplants, cloning, stem cell research, genetic manipulation, use of genetic profile, archeological discoveries, land management, resource management)

Standard 2: Leadership: Integrate knowledge, skills and practices to become a leader.

Topic 1: Develop and practice leadership skills.

Student Competencies

Introductory:

- 2.2.1 Identify the advantages of a “team” (peer coaching, cooperative learning exercises, etc).

Core:

- 2.1.1 Give presentations (for varied purposes, audiences, etc.)
- 2.1.2 Conduct a meeting (e.g., Parliamentary Procedure).
- 2.1.3 Investigate leadership organizations (e.g., SkillsUSA etc.)
- 2.1.4 Implement student-centered instruction opportunities (e.g., lab/equipment facilitation, safety instruction, etc.)

Keys to Employability

Basic Skills

1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
2. Writing → Communicates thoughts, ideas, information, and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
4. Listening → Receives, attends to, interprets, and responds to verbal messages and other cues.
5. Speaking → Organizes ideas and communicates orally

Thinking Skills

1. Creative Thinking → Generates new ideas.
2. Decision-Making → Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
3. Problem Solving → Recognizes problems and devises and implements plan of action.
4. Seeing Things in the Mind’s Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
6. Reasoning → Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

Standard 2: Leadership: Integrate knowledge, skills and practices to become a leader.

Topic 1: Develop and practice leadership skills.

Keys to Employability – Cont.

Technology

1. Selects Technology → Chooses procedures, tools, or equipment, including computers and related technologies.
2. Applies Technology to Task → Understand overall intent and proper procedures for setup and operation of equipment.
3. Maintains and Troubleshoots Equipment → Prevents identifies, or solves problems with equipment, including computers, and other technologies.

Resources

1. Time → Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
2. Money → Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
3. Material and Facilities → Acquires, stores, allocates, and uses materials or space efficiently.
4. Human Resources → Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

Interpersonal

1. Participates as a Member of a Team → Contributes to group effort.
2. Teaches Others New Skills.
3. Serves Clients/Customers → Works to satisfy customer's expectations.
4. Exercises Leadership → Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
5. Negotiates → Works toward agreements involving exchange of resources, resolves divergent interests.
6. Works with Diversity → Works well with men and women from diverse backgrounds.

Keys to Employability – Cont.

Personal Qualities

1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
3. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
4. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
5. Integrity/Honesty → Chooses ethical courses of action.

Systems

1. Understand Systems → Knows how social, organizational and technological systems work and Operates effectively with them.
2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
3. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

1. Acquires and Evaluates Information.
2. Organizes and Maintains Information.
3. Interprets and Communicates Information.
4. Uses Computers to Process Information.

Standard 2: Leadership: Integrate knowledge, skills and practices to become a leader.

Academic Cross Walk

English Language Arts

- 10.1.1 Form questions to focus research
- 10.1.4 Use relevant information
- 10.1.7 Paraphrase information
- 10.2.1 Summarize information from nonfiction genres
- 10.2.7 Apply universal themes to real life situations
- 11.2.3 Analyze details, facts, and concepts from nonfiction genres
- 11.2.6 Apply prior knowledge of content to interpret meaning of text
- 12.2.2 Critique details, facts, and concepts from nonfiction genres
- 12.2.8 Use technical language/jargon to decipher meaning

Mathematics

- 9-10.1.10 Express numbers between one-billionth and one billion in fraction, decimal, and verbal form; express numbers of all magnitudes in scientific notation

Standard 2: Leadership: Integrate knowledge, skills and practices to become a leader.

Academic Cross Walk

Science

None

Standard 3: Art and Copy Preparation: Establish art and copy preparation presentations.

Topic 1: Utilize organization skills for copy planning.

Student Competencies

Introductory:

3.1.1 Discuss postal regulations.

Core:

3.1.2 Identify illustrations as vector or halftone.

3.1.3 Recognize aspects of margins (e.g., gripper, bleed, lay-backs, etc.).

3.1.4 Integrate thumbnail sketches into a rough draft and a comprehensive layout.

Keys to Employability

Basic Skills

1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
2. Writing → Communicates thoughts, ideas, information, and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
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4. Seeing Things in the Mind's Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
6. Reasoning → Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

Standard 3: Art and Copy Preparation: Establish art and copy preparation presentations.

Topic 2: Explore the impacts of typography.

Student Competencies

Introductory

3.2.1 Identify type sizes, fonts and styles.

Core

3.2.2 Select type size, fonts and styles for a variety of products.

3.2.3 Practice rules of typography (e.g., two family fonts, readability, leaving a widow, etc.)

Keys to Employability – Cont.

Technology:

1. Selects Technology → Chooses procedures, tools, or equipment including computers and related technologies.
2. Applies Technology to Task → Understands overall intent and proper procedures for setup and operation of equipment.
3. Maintains and Troubleshoots Equipment → Prevents, identifies, or solves problems with equipment, including computers and other technologies.

Resources

1. Time → Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
2. Money → Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
3. Material and Facilities → Acquires, stores, allocates, and uses materials or space efficiently.
4. Human Resources → Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

Interpersonal

1. Participates as a Member of a Team → Contributes to group effort.
2. Teaches Others New Skills.
3. Serves Clients/Customers → Works to satisfy customer's expectations.
4. Exercises Leadership → Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
5. Negotiates → Works toward agreements involving exchange of resources, resolves divergent interests.
6. Works with Diversity → Works well with men and women from diverse backgrounds.

Standard 3: Art and Copy Preparation: Establish art and copy preparation presentations.

Topic 3: Recognize design principles in relation to media.

Student Competencies

Introductory

3.3.1 Identify the elements of a printer's color wheel.

Core

3.3.2 Distinguish methods used to achieve emphasis, balance, harmony and rhythm.

Keys to Employability – Cont.

Personal Qualities

1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
3. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
4. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
5. Integrity/Honesty → Chooses ethical courses of action.

Systems

1. Understand Systems → Knows how social, organizational, and technological systems work and operates effectively with them.
2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
3. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

1. Acquires and Evaluates Information.
2. Organizes and Maintains Information.
3. Interprets and Communicates Information
4. Uses Computers to Process Information.

Standard 3: Art and Copy Preparation: Establish art and copy preparation presentations.

Academic Cross Walk

English Language Arts

- 10.1.1 Form questions to focus research
- 10.1.4 Use relevant information
- 10.1.5 Organize information from a variety of sources into a unified whole
- 10.1.7 Paraphrase information
- 10.1.9 Develop an outline
- 10.2.7 Apply universal themes to real life situations
- 10.3.3 Use prewriting techniques to generate ideas
- 10.3.4 Organize the ideas and details of a composition according to purpose
- 10.3.8 Use language appropriate to the format of the composition
- 10.3.9 Use precise language to describe people, places, and things
- 10.3.10 Use a specific point of view in compositions
- 10.3.11 Edit and revise compositions with attention to content
- 10.3.12 Edit and revise compositions for consistent point of view
- 10.3.13 Use knowledge of sentence structure and sentence construction to edit and revise text
- 10.3.14 Use sentence reduction techniques to revise and edit compositions
- 10.4.1 Analyze the audience and adjust message and wording to suit the purpose
- 10.5.1 Analyze the audience and adjust message and wording to suit the purpose
- 10.5.2 Use media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 10.5.4 Analyze media messages
- 10.6.1 Use conventions of grammar related to sentence structure; i.e., sentence reduction, parallel structure, elliptical clauses, conjunctions, and clausal and phrasal patterns
- 10.6.2 Analyze figurative language; i.e., allusion, analogy, hyperbole, irony, personification, oxymoron, and paradox
- 11.1.5 Synthesize information in a logical sequence
- 11.2.3 Analyze details, facts, and concepts from nonfiction genres
- 11.2.5 Locate ambiguities in written text

English Language Arts – Cont.

- 11.2.6 Apply prior knowledge of content to interpret meaning of text
- 11.3.2 Organize the ideas and details of a composition according to purpose
- 11.3.7 Edit and revise compositions for standard writing conventions and transitional devices
- 11.3.8 Incorporate visual aids (e.g., graphs, tables, and pictures) into written work to enhance meaning
- 11.4.1 Analyze the audience and adjust message and wording to suit the purpose
- 11.5.1 Identify existing and developing media
- 11.5.2 Apply media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 11.6.1 Use conventions of grammar, usage, and punctuation to edit and revise
- 11.6.4 Identify emotionally charged language
- 12.2.2 Critique details, facts, and concepts from nonfiction genres
- 12.2.8 Use technical language/jargon to decipher meaning
- 12.3.1 Write business or other formal documents, including resumes, scholarship letters, and letters of inquiry or complaint
- 12.3.3 Organize the ideas and details of a composition according to purpose
- 12.3.7 Use techniques to convey an individual voice and style; e.g., tone, syntax, diction, figurative language
- 12.3.8 Edit and revise compositions for standard writing conventions and appropriate tone
- 12.3.9 Edit and revise compositions for unity, coherence, clarity, and fluency
- 12.5.1 Identify existing and developing media
- 12.5.2 Create a media project for a purpose
- 12.5.5 Examine advanced media techniques, e.g., music and sound, camera angles, lighting, and aesthetic effects
- 12.6.1 Use conventions of grammar, usage, and punctuation to edit and revise
- 12.6.2 Apply figurative language; i.e., allusion, analogy, hyperbole, irony, personification, oxymoron, and paradox

Standard 3: Art and Copy Preparation: Establish art and copy preparation presentations.

Academic Cross Walk

Mathematics

- 9-10.1.1 Express numbers between one-billionth and one billion in fraction, decimal, and verbal form; express numbers of all magnitudes in scientific notation
- 9-10.1.8 Apply estimation skills to predict realistic solutions to problems
- 9-10.1.9 Select and use a computational technique (i.e., mental calculation, paper-and-pencil, or technology) to solve problems involving real numbers
- 9-10.1.10 Explain the reasonableness of a problem's solution and the process used to obtain it
- 9-10.3.1 Construct appropriate displays of given data; i.e., circle graphs, bar graphs, histograms, stem-and-leaf plots, box-and-whisker plots, and scatter plots
- 9-10.3.2 Interpret a given visual representation (i.e., circle graphs, bar graphs, histograms, stem-and-leaf plots, box-and-whisker plots, and scatter plots) of a set of data
- 9-10.4.1 Select appropriate units and scales for problem situations involving measurement
- 9-10.4.3 Use approximations to compare the standard and metric systems of measurement; e.g., a five-kilometer race is about three miles long
- 9-10.4.4 Given a conversion factor, convert between standard and metric measurements
- 9-10.4.5 Use methods necessary to achieve a specified degree of precision and accuracy (i.e., appropriate number of significant digits) in measurement situations

Science

- 9-10.6.1 Use appropriate technologies and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills)
- 11-12.6.1 Select and use appropriate technologies, tools, and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills, CBL, graphing calculators)

Standard 4: Electronic Imaging Copy: Employ applications to create electronic imaging copy.

Topic 1: Identify formats of type composition and typesetting.

Student Competencies

Core:

- 4.1.1 Set justified copy (e.g., centered, left or right).
- 4.1.2 Set copy with tabular columns.
- 4.1.3 Set copy with dot leaders.
- 4.1.4 Set copy with base line rule or cut-off rule.
- 4.1.5 Set copy with mixed faces.
- 4.1.6 Set copy with hanging indentation.
- 4.1.7 Set copy with a run around.

Keys to Employability

Basic Skills

- 1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
- 2. Writing → Communicates thoughts, ideas, information, and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
- 3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
- 4. Listening → Receives, attends to, interprets, and responds to verbal messages and other cues.
- 5. Speaking → Organizes ideas and communicates orally.

Thinking Skills

- 1. Creative Thinking → Generates new ideas.
- 2. Decision-Making → Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
- 3. Problem Solving → Recognizes problems and devises and implements plan of action.
- 4. Seeing Things in the Mind's Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
- 5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
- 6. Reasoning → Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

Standard 4: Electronic Imaging Copy: Employ applications to create electronic imaging copy.

Topic 2: Understand proofreading elements.

Student Competencies

Introductory:

4.2.1 Recognize proofreader's marks.

Core:

4.2.2 Use spell check.

4.2.3 Implement proper grammatical forms.

Keys to Employability – Cont.

Technology

1. Selects Technology → Chooses procedures, tools, or equipment, including computers and related technologies.
2. Applies Technology to Task → Understand overall intent and proper procedures for setup and operation of equipment.
3. Maintains and Troubleshoots Equipment → Prevents identifies, or solves problems with equipment, including computers, and other technologies.

Resources

1. Time → Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
2. Money → Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
3. Material and Facilities → Acquires, stores, allocates, and uses materials or space efficiently.
4. Human Resources → Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

Interpersonal

1. Participates as a Member of a Team → Contributes to group effort.
2. Teaches Others New Skills.
3. Serves Clients/Customers → Works to satisfy customer's expectations.
4. Exercises Leadership → Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
5. Negotiates → Works toward agreements involving exchange of resources, resolves divergent interests.
6. Works with Diversity → Works well with men and women from diverse backgrounds.

Standard 4: Electronic Imaging Copy: Employ applications to create electronic imaging copy.

Topic 3: Prepare a page layout.

Student Competencies

Core:

- 4.3.1 Calculate copy parameters.
- 4.3.2 Format a page layout.

Keys to Employability – Cont.

Personal Qualities

- 1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
- 2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
- 3. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
- 4. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
- 5. Integrity/Honesty → Chooses ethical courses of action.

Systems

- 1. Understand Systems → Knows how social, organizational and technological systems work and operates effectively with them.
- 2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
- 3. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

- 1. Acquires and Evaluates Information.
- 2. Organizes and Maintains Information.
- 3. Interprets and Communicates Information.
- 4. Uses Computers to Process Information.

Standard 4: Electronic Imaging Copy: Employ applications to create electronic imaging copy.

Topic 4: Performing scanning operations.

Student Competencies

Introductory:

- 4.4.1 Set up a scanner for operation.
- 4.4.2 Scan a line art illustration.
- 4.4.3 Scan a photograph.

Core:

- 4.4.4 Produce a halftone print.
- 4.4.5 Discuss and apply scanning criterion (e.g., ppi, dpi, lpi, etc).

Standard 4: Electronic Imaging Copy: Employ applications to create electronic imaging copy.

Topic 5: Investigate methods of graphic manipulation.

Student Competencies

Core:

- 4.5.1 Import a graphic illustration from a file.
- 4.5.2 Create a graphic illustration in a programs.
- 4.5.3 Export a graphic illustration from a program.
- 4.5.4 Alter a file illustration.

Standard 4: Electronic Imaging Copy: Employ applications to create electronic imaging copy.

Topic 6: Employ storage procedures.

Student Competencies

Core:

- 4.7.1 Store a file on removable media (e.g., FDD, CD, DVD, jump drive, stick, etc.).
- 4.7.2 Store a file on a hard drive and file server.
- 4.7.3 Transfer a file from a hard drive or file server to a CD.
- 4.7.4 Transfer a file from removable media to a hard drive.

Standard 4: Electronic Imaging Copy: Employ applications to create electronic imaging copy.

Topic 7: Administer electronic imaging.

Student Competencies

Core:

- 4.8.1 Create a single-color camera-ready job.
- 4.8.2 Utilize imposition (e.g., booklets, brochures, etc.).
- 4.8.3 Create a 2-color camera ready job using electronic trapping.
- 4.8.4 Create 4-color process projects.

Standard 4: Art and Copy Preparation: Establish art and copy preparation presentations.

Academic Cross Walk

English Language Arts

- 10.1.1 Form questions to focus research
- 10.1.4 Use relevant information
- 10.1.5 Use relevant information
- 10.1.7 Paraphrase information
- 10.1.9 Develop an outline
- 10.2.7 Apply universal themes to real life situations
- 10.3.4 Organize the ideas and details of a composition according to purpose
- 10.3.8 Use language appropriate to the format of the composition
- 10.3.9 Use precise language to describe people, places, and things
- 10.3.10 Use a specific point of view in compositions
- 10.3.11 Edit and revise compositions with attention to content
- 10.3.12 Edit and revise compositions for consistent point of view
- 10.3.13 Use knowledge of sentence structure and sentence construction to edit and revise text
- 10.3.14 Use sentence reduction techniques to revise and edit compositions
- 10.4.1 Analyze the audience and adjust message and wording to suit the purpose
- 10.5.1 Identify existing and developing media
- 10.5.2 Use media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 10.5.4 Analyze media messages
- 10.6.1 Use conventions of grammar related to sentence structure; i.e., sentence reduction, parallel structure, elliptical clauses, conjunctions, and clausal and phrasal patterns
- 10.6.2 Analyze figurative language; i.e., allusion, analogy, hyperbole, irony, personification, oxymoron, and paradox
- 11.1.2 Evaluate and incorporate information from primary sources; e.g., interviews and surveys
- 11.1.4 Verify the quality, accuracy, and usefulness of Information
- 11.1.5 Synthesize information in a logical sequence

English Language Arts – Cont.

- 11.2.3 Analyze details, facts, and concepts from nonfiction genres
- 11.2.6 Apply prior knowledge of content to interpret meaning of text
- 11.3.2 Organize the ideas and details of a composition according to purpose
- 11.3.7 Edit and revise compositions for standard writing conventions and transitional devices
- 11.3.8 Incorporate visual aids (e.g., graphs, tables, and pictures) into written work to enhance meaning
- 11.4.1 Analyze the audience and adjust message and wording to suit the purpose
- 11.5.1 Identify existing and developing media
- 11.5.2 Apply media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 11.6.1 Use conventions of grammar, usage, and punctuation to edit and revise
- 11.6.4 Identify emotionally charged language
- 12.2.2 Critique details, facts, and concepts from nonfiction genres
- 12.2.8 Use technical language/jargon to decipher meaning
- 12.3.1 Write business or other formal documents, including resumes, scholarship letters, and letters of inquiry or complaint
- 12.3.3 Organize the ideas and details of a composition according to purpose
- 12.3.8 Edit and revise compositions for standard writing conventions and appropriate tone
- 12.5.1 Identify existing and developing media
- 12.5.2 Create a media project for a purpose
- 12.5.5 Examine advanced media techniques, e.g., music and sound, camera angles, lighting, and aesthetic effects
- 12.6.1 Use conventions of grammar, usage, and punctuation to edit and revise
- 12.6.2 Apply figurative language i.e., allusion, analogy, hyperbole, irony, personification, oxymoron, paradox

Standard 4: Art and Copy Preparation: Establish art and copy preparation presentations.

Academic Cross Walk

Mathematics

- 9-10.1.1 Express numbers between one-billionth and one billion in fraction, decimal, and verbal form; express numbers of all magnitudes in scientific notation
- 9-10.1.4 Represent a set of data in a matrix

Science

- 9-10.1.1 Use appropriate technologies and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills)
- 11-12.6.1 Select and use appropriate technologies, tools, and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills, CBL, graphing calculators)

Standard 5: Digital Photography: Implement digital photography skills.

Topic 1: Evaluate camera types.

Student Competencies

Core:

- 5.1.1 Set format.
- 5.1.2 Set resolution.
- 5.1.3 Set picture effect.

Keys to Employability

Basic Skills:

1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
2. Writing → Communicates thoughts, ideas, information and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs and flow charts.
3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
4. Listening → Receives, attends to, interprets, and responds to verbal messages and other cues.
5. Speaking → Organizes ideas and communicates orally.

Thinking Skills:

1. Creative Thinking → Generates new ideas.
2. Decision-Making → Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
3. Problem Solving → Recognizes problems and devises and implements plan of action.
4. Seeing Things in the Mind's Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
6. Reasoning → Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

Standard 5: Digital Photography: Implement digital photography skills.

Topic 2: Choose picture storage locations.

Student Competencies

Core:

- 5.2.1 Store files on removable media.
- 5.2.2 Transfer photo files on hard drive or file server.

Keys to Employability – Cont.

Technology

- 1. Selects Technology → Chooses procedures, tools, or equipment, including computers and related technologies.
- 2. Applies Technology to Task → Understand overall intent and proper procedures for setup and operation of equipment.
- 3. Maintains and Troubleshoots Equipment → Prevents identifies, or solves problems with equipment, including computers, and other technologies.

Resources

- 1. Time → Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
- 2. Money → Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
- 3. Material and Facilities → Acquires, stores, allocates, and uses materials or space efficiently.
- 4. Human Resources → Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

Interpersonal

- 1. Participates as a Member of a Team → Contributes to group effort.
- 2. Teaches Others New Skills.
- 3. Serves Clients/Customers → Works to satisfy customer's expectations.
- 4. Exercises Leadership → Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
- 5. Negotiates → Works toward agreements involving exchange of resources, resolves divergent interests.
- 6. Works with Diversity → Works well with men and women from diverse backgrounds.

Standard 5: Digital Photography: Implement digital photography skills.

Topic 2: Choose picture storage locations.

Keys to Employability – Cont.

Personal Qualities

1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
 1. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
 2. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
5. Integrity/Honesty → Chooses ethical courses of action.

Systems

3. Understand Systems → Knows how social, organizational and technological systems work and operates effectively with them.
2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
 4. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

1. Acquires and Evaluates Information.
2. Organizes and Maintains Information.
3. Interprets and Communicates Information.
4. Uses Computers to Process Information.

Standard 5: Digital Photography: Implement digital photography skills.

Academic Cross Walk

English Language Arts

- 10.1.1 Form questions to focus research
- 10.1.4 Use relevant information
- 10.1.5 Organize information from a variety of sources into a unified whole
- 10.1.7 Paraphrase information
- 10.2.7 Apply universal themes to real life situations
- 10.5.1 Identify existing and developing media
- 10.5.2 Use media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 11.1.2 Evaluate and incorporate information from primary sources; e.g., interviews and surveys
- 11.1.4 Verify the quality, accuracy, and usefulness of information
- 11.1.5 Synthesize information in a logical sequence
- 11.2.3 Analyze details, facts, and concepts from nonfiction genres
- 11.2.6 Apply prior knowledge of content to interpret meaning of text
- 11.3.8 Incorporate visual aids (e.g., graphs, tables, and pictures) into written work to enhance meaning
- 11.5.1 Identify existing and developing media
- 11.5.2 Apply media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 12.2.2 Critique details, facts, and concepts from nonfiction genres
- 12.2.8 Use technical language/jargon to decipher meaning
- 12.5.1 Identify existing and developing media
- 12.5.2 Create a media project for a purpose
- 12.5.5 Examine advanced media techniques, e.g., music and sound, camera angles, lighting, and aesthetic effects

Mathematics

- 9-10.1.1 Express numbers between one-billionth and one billion in fraction, decimal, and verbal form; express numbers of all magnitudes in scientific notation

Standard 5: Digital Photography: Implement digital photography skills.

Academic Cross Walk

Science

- 9-10.1.1 Explain how models can be used to illustrate scientific principles
 - 5. Describe the relationship between form and function (e.g., solids, liquids, gases, cell specialization, simple machines, and plate tectonics)
 - 6. Identify principles governing evolution and equilibrium within systems (e.g., cause and effect, positive and negative feedback)
 - 7. Use appropriate technologies and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills)
- 11-12.1.1 Explain how scientists create and use models to address scientific knowledge
 - 8. Explain the relationship between form and function (e.g., atoms and ions, enzymes, aerodynamics)
 - 9. Select and use appropriate technologies, tools, and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills, CBL, graphing calculators)

Standard 6: Image Assembly and Plate Making: Investigate aspects of image assembly and plate making.

Topic 1: Construct masking sheets using the appropriate stripping procedures.

Student Competencies

Core:

- 6.1.1 Draw lines on unruled masking sheet for 8 ½ X 11.
- 6.1.2 Strip negative on unruled and ruled masks.
- 6.1.3 Create multi-flat masking.
- 6.1.4 Strip for combination or surprinting.
- 6.1.5 Strip complimentary flats for multi-color printing.
- 6.1.6 Strip signature flats for multi-page printing.
- 6.1.7 Use the pin register system in stripping for a 2-color job.

Keys to Employability

Basic Skills

1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
2. Writing → Communicates thoughts, ideas, information, and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
4. Listening → Receives, attends to, interprets, and responds to verbal messages and other cues.
5. Speaking → Organizes ideas and communicates orally.

Thinking Skills

1. Creative Thinking → Generates new ideas.
2. Decision-Making → Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
3. Problem Solving → Recognizes problems and devises and implements plan of action.
4. Seeing Things in the Mind's Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
6. Reasoning → Discovers a rule or principle underlying.

Standard 6: Image Assembly and Plate Making: Investigate aspects of image assembly and plate making.

Topic 2: Determine plate preparation and exposure calibration techniques.

Student Competencies

Core:

- 6.2.1 Prepare a subtractive plate.
- 6.2.2 Prepare a digital plate.
- 6.2.3 Use plate exposure units.
- 6.2.4 Make corrections on a plate.
- 6.2.5 Use pin board for step-and-repeat plate exposure.
- 6.2.6 Expose for a screen tint.
- 6.2.7 Make plates for a two color job.
- 6.2.8 Expose a photo direct plate.
- 6.2.9 Develop an exposed plate.

Advanced:

- 6.2.10 Determine appropriate plate exposure.

Keys to Employability – Cont.

Personal Qualities

- 1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
- 2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
 - 6. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
 - 7. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
- 5. Integrity/Honesty → Chooses ethical courses of action.

Systems

- 8. Understand Systems → Knows how social, organizational and technological systems work and Operates effectively with them.
- 2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
 - 9. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

- 1. Acquires and Evaluates Information.
- 2. Organizes and Maintains Information.
- 3. Interprets and Communicates Information.
- 4. Uses Computers to Process Information.

Standard 6: Image Assembly and Plate Making: Investigate aspects of image assembly and plate making.

Topic 2: Determine plate preparation and exposure calibration techniques.

Keys to Employability – Cont.

Personal Qualities

1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
3. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
4. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
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Systems

1. Understand Systems → Knows how social, organizational and technological systems work and operates effectively with them.
2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
3. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

1. Acquires and Evaluates Information.
2. Organizes and Maintains Information.
3. Interprets and Communicates Information.
4. Uses Computers to Process Information.

Standard 6: Image Assembly and Plate Making

Academic Cross Walk

English Language Arts

- 10.1.1 Form questions to focus research
- 10.1.4 Use relevant information
- 10.1.5 Organize information from a variety of sources into a unified whole
- 10.1.7 Paraphrase information
- 10.2.7 Apply universal themes to real life situations
- 10.5.2 Use media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 11.1.2 Evaluate and incorporate information from primary sources; e.g., interviews and surveys
- 11.1.4 Verify the quality, accuracy, and usefulness of information
- 11.1.5 Synthesize information in a logical sequence
- 11.2.3 Analyze details, facts, and concepts from nonfiction genres
- 11.2.6 Apply prior knowledge of content to interpret meaning of text
- 11.5.2 Apply media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 12.2.2 Critique details, facts, and concepts from nonfiction genres
- 12.2.8 Use technical language/jargon to decipher meaning
- 12.5.2 Create a media project for a purpose

Mathematics

- 9-10.4.1 Select appropriate units and scales for problem situations involving measurement

Standard 6: Image Assembly and Plate Making

Academic Cross Walk

Science

- 9-10.1.1 Explain how models can be used to illustrate scientific principles
- 9-10.1.6 Identify principles governing evolution and equilibrium within systems (e.g., cause and effect, positive and negative feedback)
- 9-10.6.1 Use appropriate technologies and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills)
- 11-12.1.1 Explain how scientists create and use models to address scientific knowledge
- 11-12.6.1 Select and use appropriate technologies, tools, and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills, CBL, graphing calculators)

Standard 7: Basic Offset Press: Demonstrate basic offset press functions.

Topic 1: Understand main press systems.

Student Competencies

Introductory:

- 7.1.1 Identify the feed system.
- 7.1.2 Identify the delivery system.
- 7.1.3 Identify the ink system.
- 7.1.4 Identify the water system.

Core:

- 7.1.5 Set up systems on the press.

Keys to Employability

Basic Skills

1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
2. Writing → Communicates thoughts, ideas, information, and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
4. Listening → Receives, attends to, interprets, and responds to verbal messages and other cues.
5. Speaking → Organizes ideas and communicates orally.

Thinking Skills

1. Creative Thinking → Generates new ideas.
2. Decision-Making → Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
3. Problem Solving → Recognizes problems and devises and implements plan of action.
4. Seeing Things in the Mind's Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
6. Reasoning → Discovers a rule or principle underlying.

Standard 7: Basic Offset Press: Demonstrate basic offset press functions.

Topic 2: Demonstrate press preparation.

Student Competencies

Introductory:

- 7.2.1 Identify chemicals used for the offset press.
- 7.2.2 Identify inks used for printing.

Core:

- 7.2.3 Mix foundation solution using fountain testing equipment.
- 7.2.4 Perform pressure checks on the press.
- 7.2.5 Install blanket and plate.
- 7.2.6 Set up the sheet control system.
- 7.2.7 Set up the image control system.

Keys to Employability – Cont.

Technology

- 1. Selects Technology → Chooses procedures, tools, or equipment, including computers and related technologies.
- 2. Applies Technology to Task → Understand overall intent and proper procedures for setup and operation of equipment.
- 3. Maintains and Troubleshoots Equipment → Prevents identifies, or solves problems with equipment, including computers, and other technologies.

Resources

- 1. Time → Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
- 2. Money → Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
- 3. Material and Facilities → Acquires, stores, allocates, and uses materials or space efficiently.
- 4. Human Resources → Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

Interpersonal

- 1. Participates as a Member of a Team → Contributes to group effort.
- 2. Teaches Others New Skills.
- 3. Serves Clients/Customers → Works to satisfy customer's expectations.
- 4. Exercises Leadership → Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
- 5. Negotiates → Works toward agreements involving exchange of resources, resolves divergent interests.
- 6. Works with Diversity → Works well with men and women from diverse backgrounds.

Standard 7: Basic Offset Press: Demonstrate basic offset press functions.

Topic 3: Operate offset presswork.

Student Competencies

Core:

- 7.3.1 Print single color impression.
- 7.3.2 Produce multi-color (spot color) impression.
- 7.3.3 Demonstrate work and turn; work and tumble.
- 7.3.4 Wash up the offset press.

Keys to Employability – Cont.

Personal Qualities

- 1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
- 2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
- 3. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
- 4. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
- 5. Integrity/Honesty → Chooses ethical courses of action.

Systems

- 1. Understand Systems → Knows how social, organizational and technological systems work and Operates effectively with them.
- 2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
- 3. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

- 1. Acquires and Evaluates Information.
- 2. Organizes and Maintains Information.
- 3. Interprets and Communicates Information.
- 4. Uses Computers to Process Information.

Standard 7: Basic Offset Press: Demonstrate basic offset press functions.

Topic 4: Perform maintenance tasks.

Student Competencies

Core:

- 7.4.1 Determine lubrication requirements for a specific process.
- 7.4.2 Set up a preventative maintenance schedule in chart form.
- 7.4.3 Adjust dampening rollers to plate cylinder.
- 7.4.4 Adjust ink form rollers to blanket cylinder.
- 7.4.5 Adjust plate cylinder to blanket cylinder.
- 7.4.6 Grease plate and impression cylinder.
- 7.4.7 Deglaze ink rollers and blanket.
- 7.4.8 Change blanket.

Standard 7: Basic Offset Press: Demonstrate basic offset press functions.

Academic Cross Walk

English Language Arts

- 10.1.1 Form questions to focus research
- 10.1.4 Use relevant information
- 10.1.5 Organize information from a variety of sources into a unified whole
- 10.1.7 Organize information from a variety of sources into a unified whole
- 10.2.7 Apply universal themes to real life situations
- 10.5.2 Use media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 11.1.2 Evaluate and incorporate information from primary sources; e.g., interviews and surveys
- 11.1.4 Verify the quality, accuracy, and usefulness of information
- 11.1.5 Synthesize information in a logical sequence
- 11.2.3 Analyze details, facts, and concepts from nonfiction genres
- 11.2.6 Apply prior knowledge of content to interpret meaning of text
- 11.5.2 Apply media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 12.2.2 Critique details, facts, and concepts from nonfiction genres
- 12.2.8 Use technical language/jargon to decipher meaning
- 12.5.2 Create a media project for a purpose
- 12.5.5 Examine advanced media techniques, e.g., music and sound, camera angles, lighting, and aesthetic effects

Mathematics

- 9-10.4.1 Select appropriate units and scales for problem situations involving measurement

Standard 7: Basic Offset Press: Demonstrate basic offset press functions.

Academic Cross Walk

Science

- 9-10.1.1 Explain how models can be used to illustrate scientific principles
- 9-10.1.4 Describe the relationship between form and function (e.g., solids, liquids, gases, cell specialization, simple machines, and plate tectonics)
- 9-10.1.6 Identify principles governing evolution and equilibrium within systems (e.g., cause and effect, positive and negative feedback)
- 9-10.2.2 Use appropriate safety equipment and precautions during investigations (e.g., goggles, apron, eye wash station)
- 9-10.6.1 Use appropriate technologies and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills)
- 11-12.1.1 Explain how scientists create and use models to address scientific knowledge
- 11-12.1.3 Explain how a system can be dynamic yet may remain in equilibrium (e.g., balance of forces, Le Chatelier's Principle, acid base systems)
- 11-12.1.4 Explain the relationship between form and function (e.g., atoms and ions, enzymes, aerodynamics)
- 11-12.6.1 Select and use appropriate technologies, tools, and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills, CBL, graphing calculators)

Standard 8: Bindery: Demonstrate methods of bindery.

Topic 1: Operate a paper jogger.

Student Competencies

Core:

- 8.1.1 Demonstrate paper handling.
- 8.1.2 Demonstrate the use of a paper jogger.

Keys to Employability

Basic Skills

1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
2. Writing → Communicates thoughts, ideas, information, and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
4. Listening → Receives, attends to, interprets, and responds to verbal messages and other cues.
5. Speaking → Organizes ideas and communicates orally.

Thinking Skills

1. Creative Thinking → Generates new ideas.
2. Decision-Making → Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
3. Problem Solving → Recognizes problems and devises and implements plan of action.
4. Seeing Things in the Mind's Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
6. Reasoning → Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

Standard 8: Bindery: Demonstrate methods of bindery.

Topic 2: Operate a paper drill.

Student Competencies

Core:

8.2.1 Drill paper stock for a 3-ring binder.

Keys to Employability – Cont.

Technology

1. Selects Technology → Chooses procedures, tools, or equipment, including computers and related technologies.
2. Applies Technology to Task → Understand overall intent and proper procedures for setup and operation of equipment.
3. Maintains and Troubleshoots Equipment → Prevents identifies, or solves problems with equipment, including computers, and other technologies.

Resources

1. Time → Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
2. Money → Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
3. Material and Facilities → Acquires, stores, allocates, and uses materials or space efficiently.
4. Human Resources → Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

Interpersonal

1. Participates as a Member of a Team → Contributes to group effort.
2. Teaches Others New Skills.
3. Serves Clients/Customers → Works to satisfy customer's expectations.
4. Exercises Leadership → Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
5. Negotiates → Works toward agreements involving exchange of resources, resolves divergent interests.
6. Works with Diversity → Works well with men and women from diverse backgrounds.

Standard 8: Bindery: Demonstrate methods of bindery.

Topic 3: Operate a hydraulic paper cutter.

Student Competencies

Core:

- 8.3.1 List safety rules in the operation of a power paper cutter.
- 8.3.2 Use formula for cutting paper stock.
- 8.3.3 Use formula to determine number of sheets required for a specific job.
- 8.3.4 Make a combination cut using stock cutting formula.
- 8.3.5 Draw a cutting diagram.
- 8.3.6 Use a power paper cutter.
- 8.3.7 Maintain a power paper cutter.
- 8.3.8 Operate a round cornering machine.

Keys to Employability – Cont.

Personal Qualities

- 1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
- 2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
- 3. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
- 4. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
- 5. Integrity/Honesty → Chooses ethical courses of action.

Systems

- 1. Understand Systems → Knows how social, organizational and technological systems work and Operates effectively with them.
- 2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
- 3. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

- 1. Acquires and Evaluates Information.
- 2. Organizes and Maintains Information.
- 3. Interprets and Communicates Information.
- 4. Uses Computers to Process Information.

Standard 8: Bindery: Demonstrate methods of bindery.

Topic 4: Operate a folding machine.

Student Competencies

Core:

- 8.4.1 Set up a folding machine.
- 8.4.2 Use a folder to make the six major folds.

Standard 8: Bindery: Demonstrate methods of bindery.

Topic 5: Utilize methods of binding.

Student Competencies

Core:

- 8.6.1 Operate a binding punch.
- 8.6.2 Operate a flat stitcher.
- 8.6.3 Operate a saddle stitcher.
- 8.6.4 Demonstrate wrapping and storage.

Standard 8: Bindery: Demonstrate methods of bindery.

Academic Cross Walk

English Language Arts

- 10.1.1 Form questions to focus research
- 10.1.4 Use relevant information
- 10.1.5 Organize information from a variety of sources into a unified whole
- 10.1.7 Paraphrase information
- 10.2.7 Apply universal themes to real life situations
- 10.5.2 Use media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 11.1.2 Evaluate and incorporate information from primary sources; e.g., interviews and surveys
- 11.1.4 Verify the quality, accuracy, and usefulness of information
- 11.1.5 Synthesize information in a logical sequence
- 11.2.3 Analyze details, facts, and concepts from nonfiction genres
- 11.2.6 Apply prior knowledge of content to interpret meaning of text
- 11.5.2 Apply media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 12.2.2 Critique details, facts, and concepts from nonfiction genres
- 12.2.8 Use technical language/jargon to decipher meaning
- 12.5.2 Create a media project for a purpose

Mathematics

- 9-10.4.1 Select appropriate units and scales for problem situations involving measurement

Standard 8: Bindery: Demonstrate methods of bindery.

Academic Cross Walk

Science

- 9-10.1.1 Explain how models can be used to illustrate scientific principles
- 9-10.2.2 Use appropriate safety equipment and precautions during investigations (e.g., goggles, apron, eye wash station)
- 9-10.6.1 Use appropriate technologies and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills)
- 11-12.1.1 Explain how scientists create and use models to address scientific knowledge
- 11-12.6.1 Select and use appropriate technologies, tools, and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills, CBL, graphing calculators)

Standard 9: Paper: Analyze paper properties and costs.

Topic 1: Properties of Paper

Student Competencies

Introductory:

9.1.1 Identify the basic types and weight of paper.

Core:

9.1.2 Choose paper stock for assigned job.

9.1.3 Select equivalent weights of paper.

Keys to Employability

Basic Skills

1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
2. Writing → Communicates thoughts, ideas, information and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
4. Listening → Receives, attends to, interprets, and responds to verbal messages and other cues.
5. Speaking → Organizes ideas and communicates orally.

Thinking Skills

1. Creative Thinking → Generates new ideas.
2. Decision-Making → Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
3. Problem Solving → Recognizes problems and devises and implements plan of action.
4. Seeing Things in the Mind's Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
6. Reasoning → Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

Standard 9: Paper: Analyze paper properties and costs.

Topic 2: Understand estimating factors.

Student Competencies

Core:

- 9.2.1 Estimate costs of school print jobs.
- 9.2.2 Estimate costs of commercial shop printing jobs.
- 9.2.3 Assess the most economical cut of stock.
- 9.2.4 Determine allowances for spoilage.
- 9.2.5 Apply quality criteria to a completed print job.

Keys to Employability – Cont.

Technology

- 1. Selects Technology → Chooses procedures, tools, or equipment, including computers and related technologies.
- 2. Applies Technology to Task → Understand overall intent and proper procedures for setup and operation of equipment.
- 3. Maintains and Troubleshoots Equipment → Prevents identifies, or solves problems with equipment, including computers, and other technologies.

Resources

- 1. Time → Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
- 2. Money → Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
- 3. Material and Facilities → Acquires, stores, allocates and uses materials or space efficiently.
- 4. Human Resources → Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

Interpersonal

- 1. Participates as a Member of a Team → Contributes to group effort.
- 2. Teaches Others New Skills.
- 3. Serves Clients/Customers → Works to satisfy customer's expectations.
- 4. Exercises Leadership → Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
- 5. Negotiates → Works toward agreements involving exchange of resources, resolves divergent interests.
- 6. Works with Diversity → Works well with men and women from diverse backgrounds.

Standard 9: Paper: Analyze paper properties and costs.

Topic 2: Understand estimating factors.

Keys to Employability – Cont.

Personal Qualities

1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
3. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
4. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
5. Integrity/Honesty → Chooses ethical courses of action.

Systems

1. Understand Systems → Knows how social, organizational and technological systems work and Operates effectively with them.
2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
3. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

1. Acquires and Evaluates Information.
2. Organizes and Maintains Information.
3. Interprets and Communicates Information.
4. Uses Computers to Process Information.

Standard 9: Paper: Analyze paper properties and costs.

Academic Cross Walk

English Language Arts

- 10.1.1 Form questions to focus research
- 10.1.4 Use relevant information
- 10.1.5 Organize information from a variety of sources into a unified whole
- 10.1.7 Paraphrase information
- 10.2.1 Summarize information from nonfiction genres
- 10.2.7 Apply universal themes to real life situations
- 10.5.2 Use media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 11.1.2 Evaluate and incorporate information from primary sources; e.g., interviews and surveys
- 11.1.4 Verify the quality, accuracy, and usefulness of information
- 11.2.3 Analyze details, facts, and concepts from nonfiction genres
- 11.2.6 Apply prior knowledge of content to interpret meaning of text
- 11.5.2 Apply media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 12.2.2 Critique details, facts, and concepts from nonfiction genres
- 12.2.8 Use technical language/jargon to decipher meaning
- 12.5.2 Create a media project for a purpose

Mathematics

- 9-10.1.8 Apply estimation skills to predict realistic solutions to problems
- 9-10.1.9 Select and use a computational technique (i.e., mental calculation, paper-and-pencil, or technology) to solve problems involving real numbers
- 9-10.4.1 Select appropriate units and scales for problem situations involving measurement
- 9-10.4.3 Use approximations to compare the standard and metric systems of measurement; e.g., a five-kilometer race is about three miles long
- 9-10.4.4 Given a conversion factor, convert between standard and metric measurements
- 9-10.4.5 Use methods necessary to achieve a specified degree of precision and accuracy (i.e., appropriate number of significant digits) in measurement situations
- 9-10.4.6 Employ estimation techniques to evaluate reasonableness of results in measurement situations

Standard 9: Paper: Analyze paper properties and costs.

Academic Cross Walk

Science

- 9-10.1.1 Explain how models can be used to illustrate scientific principles
- 9-10.1.4 Describe the relationship between form and function (e.g., solids, liquids, gases, cell specialization, simple machines, and plate tectonics)
- 9-10.6.1 Use appropriate technologies and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills)
- 11-12.1.1 Explain how scientists create and use models to address scientific knowledge
- 11-12.1.4 Explain the relationship between form and function (e.g., atoms and ions, enzymes, aerodynamics)
- 11-12.6.1 Select and use appropriate technologies, tools, and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills, CBL, graphing calculators)

Standard 10: Screen Printing: Perform various stages of screen printing.

Topic 1: Select screen material for appropriate use.

Student Competencies

Core:

10.1.1 Distinguish basic types and sizes of screen mesh.

10.1.2 Show stretching of screen mesh on frame.

Keys to Employability

Basic Skills

1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
2. Writing → Communicates thoughts, ideas, information, and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
4. Listening → Receives, attends to, interprets, and responds to verbal messages and other cues.
5. Speaking → Organizes ideas and communicates orally.

Thinking Skills

1. Creative Thinking → Generates new ideas.
2. Decision-Making → Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
3. Problem Solving → Recognizes problems and devises and implements plan of action.
4. Seeing Things in the Mind's Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
6. Reasoning → Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

Standard 10: Screen Printing: Perform various stages of screen printing.

Topic 2: Utilize block-out material.

Student Competencies

Core:

- 10.2.1 Use hand cut paper and film.
- 10.2.2 Implement light sensitive emulsion.

Keys to Employability – Cont.

Technology

- 1. Selects Technology → Chooses procedures, tools, or equipment, including computers and related technologies.
- 2. Applies Technology to Task → Understand overall intent and proper procedures for setup and operation of equipment.
- 3. Maintains and Troubleshoots Equipment → Prevents identifies, or solves problems with equipment, including computers, and other technologies.

Resources

- 1. Time → Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
- 2. Money → Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
- 3. Material and Facilities → Acquires, stores, allocates, and uses materials or space efficiently.
- 4. Human Resources → Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

Interpersonal

- 1. Participates as a Member of a Team → Contributes to group effort.
- 2. Teaches Others New Skills.
- 3. Serves Clients/Customers → Works to satisfy customer's expectations.
- 4. Exercises Leadership → Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
- 5. Negotiates → Works toward agreements involving exchange of resources, resolves divergent interests.
- 6. Works with Diversity → Works well with men and women from diverse backgrounds.

Standard 10: Screen Printing: Perform various stages of screen printing.

Topic 3: Introduce screen printing inks.

Student Competencies

Introductory:

- 10.3.1 Compare and contrast water-based and oil-based ink & solvents.
- 10.3.2 Distinguish between air-set and heat-set inks.

Keys to Employability – Cont.

Personal Qualities

- 1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
- 2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
- 3. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
- 4. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
- 5. Integrity/Honesty → Chooses ethical courses of action.

Systems

- 1. Understand Systems → Knows how social, organizational and technological systems work and operates effectively with them.
- 2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
- 3. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

- 1. Acquires and Evaluates Information.
- 2. Organizes and Maintains Information.
- 3. Interprets and Communicates Information.
- 4. Uses Computers to Process Information.

Standard 10: Screen Printing: Perform various stages of screen printing.

Topic 4: Illustrate aspects of alignment.

Student Competencies

Core:

- 10.4.1 Demonstrate centering of image on screen frame.
- 10.4.2 Align screens for registration of multi-color images.

Standard 10: Screen Printing: Perform various stages of screen printing.

Academic Cross Walk

English Language Arts

- 10.1.1 Form questions to focus research
- 10.1.4 Use relevant information
- 10.1.5 Organize information from a variety of sources into a unified whole
- 10.1.7 Paraphrase information
- 10.2.7 Apply universal themes to real life situations
- 10.5.2 Use media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 11.1.2 Evaluate and incorporate information from primary sources; e.g., interviews and surveys
- 11.1.4 Verify the quality, accuracy, and usefulness of information
- 11.1.5 Synthesize information in a logical sequence
- 11.2.3 Analyze details, facts, and concepts from nonfiction genres
- 11.2.6 Apply prior knowledge of content to interpret meaning of text
- 11.5.2 Apply media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 12.2.2 Critique details, facts, and concepts from nonfiction genres
- 12.2.8 Use technical language/jargon to decipher meaning
- 12.5.2 Create a media project for a purpose
- 12.5.5 Examine advanced media techniques, e.g., music and sound, camera angles, lighting, and aesthetic effects

Mathematics

- 9-10.1.9 Select and use a computational technique (i.e., mental calculation, paper-and-pencil, or technology) to solve problems involving real numbers
- 9-10.1.10 Explain the reasonableness of a problem's solution and the process used to obtain it
- 9-10.4.1 Select appropriate units and scales for problem situations involving measurement
- 9-10.4.6 Employ estimation techniques to evaluate reasonableness of results in measurement situations

Standard 10: Screen Printing: Perform various stages of screen printing.

Academic Cross Walk

Science

- 9-10.1.1 Explain how models can be used to illustrate scientific principles
- 9-10.1.4 Describe the relationship between form and function (e.g., solids, liquids, gases, cell specialization, simple machines, and plate tectonics)
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- 11-12.1.1 Explain how scientists create and use models to address scientific knowledge
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- 11-12.1.4 Explain the relationship between form and function (e.g., atoms and ions, enzymes, aerodynamics)
- 11-12.6.1 Select and use appropriate technologies, tools, and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills, CBL, graphing calculators)

Standard 11: Vinyl Cutting: Demonstrate vinyl cutting techniques.

Topic 1: Operate a vinyl cutting machine (plotter).

Student Competencies

Core:

- 11.1.1 Demonstrate knowledge of machine's working parts
- 11.1.2 Show how to load and release rolls of vinyl.
- 11.1.3 Compare and contrast the application of sign and iron-on vinyl.

Keys to Employability

Basic Skills

- 1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
- 2. Writing → Communicates thoughts, ideas, information, and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
- 3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
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- 1. Creative Thinking → Generates new ideas.
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- 4. Seeing Things in the Mind's Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
- 5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
- 6. Reasoning → Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

Standard 11: Vinyl Cutting: Demonstrate vinyl cutting techniques.

Topic 2: Utilize application software.

Student Competencies

Core:

- 11.2.1 Demonstrate use of basic drawing tools.
- 11.2.2 Import vectored graphics.
- 11.2.3 Align, center, and group different design components.

Keys to Employability – Cont.

Technology

- 1. Selects Technology → Chooses procedures, tools, or equipment, including computers and related technologies.
- 2. Applies Technology to Task → Understand overall intent and proper procedures for setup and operation of equipment.
- 3. Maintains and Troubleshoots Equipment → Prevents identifies, or solves problems with equipment, including computers, and other technologies.

Resources

- 1. Time → Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
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Interpersonal

- 1. Participates as a Member of a Team → Contributes to group effort.
- 2. Teaches Others New Skills.
- 3. Serves Clients/Customers → Works to satisfy customer's expectations.
- 4. Exercises Leadership → Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
- 5. Negotiates → Works toward agreements involving exchange of resources, resolves divergent interests.
- 6. Works with Diversity → Works well with men and women from diverse backgrounds.

Standard 11: Vinyl Cutting: Demonstrate vinyl cutting techniques.

Topic 3: Perform vinyl application.

Student Competencies

Core:

- 11.3.1 Perform weeding-out of sign vinyl and use of transfer tape.
- 11.3.2 Demonstrate application of vinyl image to desired substrate.
- 11.3.3 Practice application of shirt vinyl with heat transfer machine.

Keys to Employability – Cont.

Personal Qualities

- 1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
- 2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
- 3. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
- 4. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
- 5. Integrity/Honesty → Chooses ethical courses of action.

Systems

- 1. Understand Systems → Knows how social, organizational and technological systems work and Operates effectively with them.
- 2. Monitors and Corrects Performance → Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.
- 3. Improves or Designs Systems → Suggests modifications to existing systems and develops new or alternative systems to improve performance.

Information

- 1. Acquires and Evaluates Information.
- 2. Organizes and Maintains Information.
- 3. Interprets and Communicates Information.
- 4. Uses Computers to Process Information.

Standard 11: Vinyl Cutting: Demonstrate vinyl cutting techniques.

Academic Cross Walk

English Language Arts

- 10.1.1 Form questions to focus research
- 10.1.4 Use relevant information
- 10.1.5 Organize information from a variety of sources into a unified whole
- 10.1.7 Paraphrase information
- 10.2.7 Apply universal themes to real life situations
- 10.5.2 Use media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 11.1.2 Evaluate and incorporate information from primary sources; e.g., interviews and surveys
- 11.1.4 Verify the quality, accuracy, and usefulness of information
- 11.1.5 Synthesize information in a logical sequence
- 11.2.3 Analyze details, facts, and concepts from nonfiction genres
- 11.2.6 Apply prior knowledge of content to interpret meaning of text
- 11.5.2 Apply media (e.g., television, film, music, electronic databases, videos, DVDs, comics, visual and performing arts, newspapers, and periodicals) for a variety of purposes
- 12.2.2 Critique details, facts, and concepts from nonfiction genres
- 12.2.8 Use technical language/jargon to decipher meaning
- 12.5.2 Create a media project for a purpose
- 12.5.5 Examine advanced media techniques, e.g., music and sound, camera angles, lighting, and aesthetic effects

Mathematics

- 9-10.1.9 Select and use a computational technique (i.e., mental calculation, paper-and-pencil, or technology) to solve problems involving real numbers
- 9-10.4.6 Employ estimation techniques to evaluate reasonableness of results in measurement situations

Standard 11: Vinyl Cutting: Demonstrate vinyl cutting techniques.

Academic Cross Walk

Science

- 9-10.1.1 Explain how models can be used to illustrate scientific principles
- 9-10.1.4 Describe the relationship between form and function (e.g., solids, liquids, gases, cell specialization, simple machines, and plate tectonics)
- 9-10.1.6 Identify principles governing evolution and equilibrium within systems (e.g., cause and effect, positive and negative feedback)
- 9-10.2.2 Use appropriate safety equipment and precautions during investigations (e.g., goggles, apron, eye wash station)
- 9-10.6.1 Use appropriate technologies and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills)
- 11-12.1.1 Explain how scientists create and use models to address scientific knowledge
- 11-12.1.4 Explain the relationship between form and function (e.g., atoms and ions, enzymes, aerodynamics)
- 11-12.6.1 Select and use appropriate technologies, tools, and techniques to solve a problem (e.g., computer-assisted tools, Internet, research skills, CBL, graphing calculators)

Standard 12: Sand Carving: Perform sand carving procedures.

Topic 1: Use various methods for the generation of positives.

Student Competencies

Core:

- 12.1.1 Draw image by hand using a Sharpie marker.
- 12.1.2 Generate image using computer software.
- 12.1.3 Use Imager to burn image on film and the Processor to develop film.

Keys to Employability

Basic Skills

- 1. Reading → Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
- 2. Writing → Communicates thoughts, ideas, information, and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
- 3. Arithmetic/Mathematics → Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
- 4. Listening → Receives, attends to, interprets, and responds to verbal messages and other cues.
- 5. Speaking → Organizes ideas and communicates orally.

Thinking Skills

- 1. Creative Thinking → Generates new ideas.
- 2. Decision-Making → Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
- 3. Problem Solving → Recognizes problems and devises and implements plan of action.
- 4. Seeing Things in the Mind's Eye → Organizes, processes symbols, pictures, graphs, objects and other information.
- 5. Knowing How to Learn → Use efficient learning techniques to acquire and apply new knowledge and skills.
- 6. Reasoning → Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

Standard 12: Sand Carving: Perform sand carving procedures.

Topic 2: Produce imagery with masking materials.

Student Competencies

Core:

- 13.2.1 Demonstrate the use of sign vinyl for masking.
- 13.2.2 Expose and wash-out image on light sensitive masking film.

Keys to Employability – Cont.

Technology

- 1. Selects Technology → Chooses procedures, tools, or equipment, including computers and related technologies.
- 2. Applies Technology to Task → Understand overall intent and proper procedures for setup and operation of equipment.
- 3. Maintains and Troubleshoots Equipment → Prevents identifies, or solves problems with equipment, including computers, and other technologies.

Resources

- 1. Time → Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
- 2. Money → Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
- 3. Material and Facilities → Acquires, stores, allocates, and uses materials or space efficiently.
- 4. Human Resources → Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

Interpersonal

- 1. Participates as a Member of a Team → Contributes to group effort.
- 2. Teaches Others New Skills.
- 3. Serves Clients/Customers → Works to satisfy customer's expectations.
- 4. Exercises Leadership → Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
- 5. Negotiates → Works toward agreements involving exchange of resources, resolves divergent interests.
- 6. Works with Diversity → Works well with men and women from diverse backgrounds.

Standard 12: Sand Carving: Perform sand carving procedures.

Topic 3: Perform mask applications.

Student Competencies

Core:

- 13.3.1 Demonstrate the application of mask adhesive to desired substrate.
- 13.3.2 Show how film mask is applied to substrate over dried adhesive.
- 13.3.3 Remove air bubbles from applied film mask.
- 13.3.4 Apply vinyl tape to rest of project to protect it during blasting.

Keys to Employability – Cont.

Personal Qualities

- 1. Responsibility → Exerts a high level of effort and perseveres towards goal attainment.
- 2. Self-Esteem → Believes in own self worth and maintains a positive view of self.
- 3. Sociability → Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group setting.
- 4. Self-Management → Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
- 5. Integrity/Honesty → Chooses ethical courses of action.

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Information

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Standard 12: Sand Carving: Perform sand carving procedures.

Topic 4: Demonstrate sandblasting techniques.

Student Competencies

Introductory:

- 13.4.1 Show the major components of sandblasting equipment.
- 13.4.2 Identify the proper settings of air valves and corresponding air pressure.

Core:

- 13.4.3 Demonstrate the proper technique used to sand carve.
- 13.4.4 Recycle the sand.
- 13.4.5 Remove masking materials and clean up project.

Standard 12: Sand Carving: Perform sand carving procedures.

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Mathematics

None

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Academic Cross Walk

Science

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